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NASA begins year with leadership change

Sean O'Keefe was sworn in as NASA's 10th Administrator on Dec. 21, 2001, following his nomination by President George W. Bush on Nov. 14 and confirmation by the U.S. Senate on Dec. 20.

Sean O'Keefe

"Mr. O'Keefe comes to NASA at a time when both his strength as a policymaker and his fiscal experience will serve the Agency well," Stennis Space Center Acting Director Mark Craig said. "I am confident that great things are destined for NASA under his guidance."

O'Keefe came to NASA from the Office of Management and Budget (OMB), where, as the first deputy cabinet officer appointed in the Bush Administration, he oversaw the preparation, management and administration of the federal budget and government-wide management initiatives across the Executive Branch.

Before joining OMB, O'Keefe was the Louis A. Bantle Professor of Business and Government Policy at the Syracuse University Maxwell School of Citizenship and Public Affairs. He also served as the director of National Security Studies, a partnership of Syracuse University and Johns Hopkins University, for the delivery of executive education programs for senior military and civilian Department of Defense managers. Prior to his appointment to these positions in 1996, he was professor of business administration and assistant to the senior vice president for research and dean of the graduate school at Pennsylvania State University.

A native of New Orleans, O'Keefe served in the administration of President George H.W. Bush, first as comptroller

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NASA's Space Shuttle Program Manager Ron Dittemore, left, weathers the cold and talks with NASA's James Halsell, center, manager of the Space Shuttle Launch Integration program at Kennedy Space Center and Stennis Space Center Acting Director Mark Craig, right. The three along with more than 20 NASA staff members from Kennedy and Johnson Space Center toured Stennis and witnessed the 1,000-second test of the Space Shuttle Main Engine Block II E 0526 on Jan. 8. Halsell is a Louisiana native from West Monroe and a former astronaut.

Combined Federal, United Way Campaign exceeds expectations

Final tallies in the Stennis Space Center's Combined Federal/United Way Campaign for 2001 totalled $344,138 sitewide, according to Bari Matherne, head of United Way and the Combined Federal Campaign office in Gulfport.

Dr. Paul Moersdorf, director of the National Data Buoy Center and chairman of the 2001 Combined Federal Campaign, said the federal agencies at Stennis pledged more than $229,416, surpassing the center's goal of $218,000 by $11,416.

Moersdorf said the Mississippi Coast Association of Federal Administrators recognized Stennis' federal participation in December with 12 of 18 awards designated for the Southern Mississippi Campaign. NASA and the National Data Buoy Center led south Mississippi in per capita contributions.

The Naval Small Craft Instruction and Technical Training School received first-place recognition for the percentage of increase in contributions. The National Coastal Data Development Center, along with the National Marine Fisheries, tied for first place in the participation category.

Dave Geiger, site manager for The Boeing Company and chairman of the industrial contractor's United Way Campaign, said the effort raised $99,166 in employee contributions.

"This is 10 percent more than last year," Geiger said. "The corporate donations yielded $15,556, giving a grand total of $114,722. This is the

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NASA recap

2001 held challenges, accomplishments

As NASA's space odyssey for 2001 comes to an end, the Agency faces a year of transition and new challenges as it prepares to continue its mission of discovery into the new millennium.

In 2001, the International Space Station celebrated its first full year of human habitation. The successful arrival of NASA's Mars Odyssey at the red planet energized space scientists, and for the first time, NASA created a complete biological record of Earth.

In 2001, the Space Shuttle turned 20 as NASA launched an initiative to find better and cheaper access to space, all while facing new fiscal realities that could fundamentally change the way the Agency does business.

Change of NASA leadership: For the first time in nearly a decade, NASA will have new leadership. Sean O'Keefe, former deputy director of the Office of Management and Budget, was confirmed as the Agency's new Administrator.

Flags for Heroes and Families: The tragic events of Sept. 11 brought the nation together with a new sense of pride and determination. Expedition Three Commander Frank Culbertson, the only American not on Earth the day of the attacks, documented visible signs of the destruction from the International Space Station. To honor those heroes killed and seriously hurt in New York, Washington and Pennsylvania, NASA sent more than 6,000 American flags into space aboard the Space Shuttle Endeavour.

NASA's Mars program sees red: The Mars exploration program rebounded in 2001 when Mars Odyssey successfully entered orbit around the red planet following a six-month, 286-million mile journey. In 2001, Mars Global Surveyor sent back its 100,000th image of the Martian surface, and, in tandem with the Hubble Space Telescope, witnessed the largest global dust storm seen in decades on the Martian surface.

The search for universal life: In 2001, astronomers using the Hubble Space Telescope measured the atmosphere of a planet outside the solar system. Astronomers funded by NASA and the National Science Foundation discovered eight new

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More than 13 representatives of The Sun Herald newspaper editorial board met with NASA officials, representatives of the Navy and other resident agencies Jan. 11 to discuss public affairs events and activities at Stennis Space Center. From left, The Sun Herald's Stan Tiner, executive editor and vice president of Gulf Publishing Co., talks with Rear Adm. Thomas Q. Donaldson V, Commander, Naval Meteorology and Oceanography Command; NASA's Mike Dawson, manager of the Propulsion Test Program Office at Stennis and chairman of the Rocket Propulsion Test Management Board; and The Sun Herald's Ricky Matthews, publisher and president of Gulf Publishing Co.

NEWSCLIPS

NASA cataract study may help astronauts see clearly — A recent NASA study at Johnson Space Center, Houston, which showed that astronauts who have spent more time in space are more likely to have cataracts, will pave the way for developing new techniques to protect space travelers. The researchers linked the increased incidence of cataracts to the presence of heavy-ion radiation in space, outside Earth's protective atmosphere. NASA is developing countermeasures to protect space travelers, including reducing exposure to ultraviolet (UV) radiation from sunlight, using selective UV-blocking eye wear, adding shielding on the International Space Station, and conducting research to investigate the effectiveness of anti-oxidants in slowing the progression of age-related and radiation-induced cataracts.

All-terrain rovers may scale Mars' cliffs — NASA researchers are developing new autonomous robotic explorers that can drive up steep hills and descend vertical cliffs. As development of the All-Terrain Explorer continues, engineers at the Mechanical and Robotics Technologies Group at NASA's Jet Propulsion Laboratory, Pasadena, Calif., envision that their work may well be part of a Mars mission to explore the red planet. Closer to home, there are potentially important terrestrial applications, including urban and rural search-and-rescue operations.

Scientist finds some meteorites not sugar-free — A discovery by a NASA scientist at Ames Research Center, Moffett Field, Calif., of sugar and several related organic compounds in two carbonaceous meteorites provides the first evidence that a fundamental building block of life on Earth may have come from outer space. This discovery shows it's highly likely that organic synthesis critical to life has gone on throughout the universe. Researchers say more study on the meteorites is essential to determine the significance of these findings.

As astronauts and cosmonauts have adapted to home life on the International Space Station (ISS), they have found amateur radio, often referred to as ham radio, and its electronic connection to life here on Earth to be a constant companion.

During a spacewalk on Jan. 14, the crew installed an antenna system that enabled a key facet of the ISS ham radio station to move into much more comfortable and convenient surroundings inside the station's living quarters.

Since November 2000, amateur radio equipment has been used by Expedition astronauts and cosmonauts to talk to hundreds of kids in schools around the world, including students at St. Clare School in Waveland, who are scheduled to talk with astronauts Friday, Jan. 18.

During the spacewalk, Expedition Four Commander Yuri Onufrienko and Flight Engineer Carl Waltz installed the first of four antennas built by the Amateur Radio on the International Space Station (ARISS) team.

Like the space station itself, these new antennas are the result of an international team effort. The Italian partners provided one portion; the Russians designed the system and provided the EVA handling and attachment hardware; and NASA performed the assembly and tests to qualify the units for use in space.

In 1996, delegates from eight nations involved in the space station project, representing major national radio organizations and The Radio Amateur Satellite Corporation (AMSAT), signed an agreement forming ARISS to design, build and operate amateur radio equipment.

In the United States, the American Radio Relay League and AMSAT provide leadership and consultation. They donate and build hardware and make sure safety and qualification tests are successfully completed.

Frederick Gregory named acting associate administrator for Office of Space Flight

NASA Associate Administrator Frederick Gregory, an astronaut and former senior executive responsible for the safety and reliability of all Agency programs, was named acting associate administrator for the Office of Space Flight on Dec. 10. Gregory, 60, replaces Joseph Rothenberg, who retired Dec. 15.

"Safety permeates everything Fred does," said former Acting NASA Administrator Daniel Mulville. "He's the right person for this job. His experience as an astronaut, pilot and manager of flight safety programs is essential during this period of transition for the Office of Space Flight."

Frederick Gregory

Gregory has been in charge of overseeing all safety issues within NASA through the development, implementation, and oversight of reliability, maintainability and quality assurance policies.

Gregory has been awarded the Defense Superior Service Medal; two Distinguished Flying Crosses; the Meritorious Service Medal; the Defense Meritorious Service Medal; the Air Force Commendation Medal; three NASA Space Flight medals; and the National Society of Black Engineers Distinguished National Scientist Award.

NASA's Space Station Imagination exhibit, a full-sized mock-up of two International Space Station modules, will be at the I-10 Welcome Center in Hancock County Jan. 30 through Feb. 7. Sponsored by Johnson Space Center, Houston, and presented by Stennis Space Center, this is the first stop for the exhibit in a national tour.

International Space Station traveling exhibit makes debut visit at I-10 Launch Pad Jan. 30

Beginning Jan. 30, the public can experience life aboard the International Space Station (ISS) without leaving Earth's atmosphere. NASA's "Space Station Imagination" traveling exhibit will be on display at the Launch Pad at the Hancock County I-10 Welcome Center from 9 a.m. to 5 p.m., Jan. 30 - Feb. 7. The stop is the first of a national tour.

The exhibit is comprised of two 48-foot trailers that form two modules of the ISS — the habitation module or "living quarters" and the laboratory module.

Guests can board the interactive exhibit, see a life-sized robotic animatron, "Astronaut Emily," and catch a glimpse of how astronauts work, eat and sleep onboard the real space station, which recently celebrated one full year of human habitation 240 miles above the Earth.

Safety is a top priority at the E-Complex. Lockheed Martin's mechanical technicians R.B. Shaw, left, and Mike Shaw, right, are dressed in full protective gear as they check a connection prior to a hydrogen peroxide transfer to the E-3 Cell 2 test facility.

Test conductor Skip Roberts, left, consults with Jeff Lott, also a test conductor, prior to a LOX coldflow test for the 250K Hybrid program in the E-1 test facility. Both Roberts and Lott are with NASA.

NASA's Kerry Klein, left, E-2 test director, goes over test-stand wiring with Lockheed Martin's Alvin Richards.

Clockwise, Lockheed Martin's electrical technicians Bryon Bordelon, Teresa Reese and Charles Taconi work to install upgrades in the E-2 signal conditioning building.

NASA's Don Beckmeyer, E-3 test director, left, checks on an electrical connection with Nate LaBorde, center, and Keith Stockstill, right, both with NASA.

Craig Chandler, left, and Jarod Grover, both with NASA, conduct a visual inspection of the Boeing/Rocketdyne Advanced Catalyst Bed Testing program at the E-3 Cell 2 test facility.

A Day in the Life of . . .

Propulsion systems testing with

E-Complex Operations

Stennis' fastest growing service in the rocket propulsion testing market is offered by the E-Complex.

"As both governmental and commercial customers explore opportunities created with the development of lower cost propulsion systems that use a variety of fuels, components and hybrid technology, the demand for facilities provided by the E-Complex is ever-increasing," NASA's Boyce Mix, director of the Propulsion Test Directorate at Stennis, said. One of its first uses was to ground-test rocket engine components for NASA's Space Launch Initiative (SLI).

Stennis recognized the rapid growth in the development market and, in the fall of 2000, committed to upgrading facilities, which are scheduled for completion next year. The upgrades include additional pressure vessels, vessel foundations, ducting and pressurization components, and infrastructure for the three-stand facility. Other improvements in the planning include new propellant storage, pressurant gas vessels, flare stacks, de-ionized water systems and increased purge systems.

"The upgrades are geared to enhance operational efficiency and test turn-around time," NASA's David Liberto, project manager in the Propulsion Test Division, said.

More than 140 operations and engineering personnel staff the E-Complex, which is comprised of NASA; Lockheed Martin Space Operations, Stennis Programs; the Boeing Company and Mississippi Space Services.

"The NASA personnel work hand-in-hand with the contractors," NASA's Bartt Hebert, Chief of E-Complex operations, said. "We are called on to perform component-level testing on articles such as pre-burners, turbopumps, thrust chambers, catalyst beds and hybrid rocket motors using various propellants including hydrogen peroxide, RP-1, JP-8, oxygen and hydrogen."

According to Hebert, a typical day begins at 6:45 a.m. with a telecon among test directors and support personnel to coordinate the activities of the day with the rest of the site. The E-Complex has three stands with seven testing cells.

"On any given day, the test schedule will call for a wide range of requirements that will involve a number of groups across the site, including the Propellant Handling crew and the High Pressure Gas Facility," Hebert said. "Coordination and cooperation are essential if we are to meet project goals."

And, the E-Complex's reputation for meeting and surpassing project goals is growing. "Recently, engineers on the E-3 test stand completed an unprecedented 249 tests in a 26-day period on the Boeing/Rocketdyne Advanced Catalyst Bed," NASA's Don Beckmeyer, E-3 test director, said. "The cat bed will drive two turbopumps that will eventually be the heart of Boeing's RS-82 propulsion system. This project has experienced very few problems or delays. Overall, it has gone tremendously well."

Other projects take a less direct path to success. In November, the E-1 test team successfully completed the first phase in an important test series for the Integrated Powerhead Demonstrator (IPD) Liquid Oxygen Turbopump.

"Credit has to be given to the test teams," NASA's Bruce Farner, IPD project manager, said. "The program experienced a number of starts and stops as each phase of the testing developed more questions. It was a textbook example of just what the E-Complex can offer in defining engineering solutions." The IPD program is developing new technologies for NASA's SLI program in developing second-generation propulsion systems.

Safety is the priority at the E-Complex. High-pressures, extreme temperatures and state-of-the-art developmental hardware pose a near-perfect recipe for potential emergencies. "The demands to replicate the conditions of a working rocket engine are huge," said NASA's Nickey Raines, test director for

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NASA small business program helps hydrogen flame imager system soar to new heights

Through NASA's Small Business Innovative Research (SBIR) program, administered by the Stennis Office of Technology Transfer, Duncan Technologies Inc. of Auburn, Calif., is finding new and different markets for its hydrogen flame imaging system and has achieved a milestone of $1 million in sales.

The goals of NASA's SBIR program are to stimulate technological innovation, increase the use of small businesses, including women-owned and disadvantaged firms, in meeting federal research and development needs, and increasing private-sector commercialization of innovations derived from federally funded research.

When Judy and Dave Duncan of Duncan Technologies developed a color hydrogen flame imaging system in the early 1990s, their market prospects were limited. The system detects hydrogen flames invisible to the naked eye and replaces the risky "broom method," which involved waving a straw broom in a suspicious area to see if it would ignite to reveal invisible flames.

The market for the imaging system included hydrogen suppliers, refineries, petroleum companies, food and semiconductor processors, the fertilizer industry, cosmetic companies, the hydrogen vehicle-monitoring and maintenance industries, and the race car industry.

Today, the Duncan camera creates higher resolution images that have given the company a new foothold in several more arenas including industrial inspections, scientific imaging applications and some unusual applications. For instance, one customer uses the camera in amusement park rides to take photographs of people screaming on a roller coaster. The high-resolution photo can be reproduced in a large format and is marketed to people who want a photographic memento.

"The SBIR program can be of significant value to small businesses," Kirk Sharp, manager of NASA's Office of Technology Transfer at Stennis, said. "The success experienced by Duncan Technologies demonstrates how the SBIR program can support a small company's bottom line, if the topic of their work stays aligned with their business plan or core competency."

"Working with NASA's SBIR program and the people at Stennis, we have gotten involved in other imaging areas," Judy Duncan, co-owner and CEO of Duncan Technologies, said. "We are working with groups doing research on multi-spectral imaging for use in poultry processing to detect fecal contamination. And, from the basic architecture we created, we have continued to develop more generic digital cameras. Our work with SBIR allows us to further enhance our technology, address government needs and develop new commercial products."

NASA's Office of Environmental Assurance at Stennis Space Center held two informational sessions Dec. 11, one at Stennis for employees and another for the public at the Hancock County Public Library. The session focused on NASA's proposed environmental cleanup plans for two areas at the space center. NASA's Environmental Officer Ron Magee, center, discusses the cleanup plans with, from left, Sharon Chittam and Scott Haas, both of Foster Wheeler Environmental Corp.; Michael Slack and Phillip Weathersby of the Mississippi Department of Environmental Quality; and Gerry Bauer of the Naval Facilities Engineering Command.

Rhodes named equal opportunity officer at Stennis

NASA's Jean Rhodes was named equal opportunity officer at Stennis Space Center in November. Prior to arriving at Stennis, Rhodes managed discrimination complaints, alternative dispute resolution and federal women's programs at Kennedy Space Center in Florida.

Before joining NASA in 1985, she was a civilian employee of the United States Air Force for eight years, working in Nevada, Virginia, Florida, Germany and Spain.

Rhodes resides in Picayune with her husband, Roger. Their two grown children live in Florida.

Lockheed names new general manager for Stennis operations

Cleon Lacefield, former vice president of Lockheed Martin Space Systems Advance Reusable Launch Vehicle program, has been named general manager of Lockheed Martin Space Operations, Stennis Programs. Lacefield will replace Chet Miller, who will retire Feb. 28.

Lacefield has more than 30 years of aerospace experience in design, development and operations of flight hardware programs. Most recently, Lacefield directed the design, development and testing of the X-33 flight demonstration vehicle for Lockheed Martin.

Lacefield also worked for NASA as a flight director in mission control at Johnson Space Center, Houston, overseeing the direction of 11 Space Shuttle missions. He holds a degree in aerospace engineering from California Polytechnic State University, San Luis Obispo, Calif. He is a registered professional engineer and served in the U. S. Navy as an A-7 pilot.

Ryan Dearman and Wendy Lesieur, visitor relations specialists at StenniSphere, star as Astronauts Cosmo and Dr. Halley Comet, respectively, in the new stage show, 'Oh My Stars, We've Landed on Mars.' In the photo above, the actors are exploring the surface of Mars, where their spaceship has crash-landed. Under the direction of InDyne's Cheryl Bennett, StenniSphere's public services manager, Dearman and Lesieur wrote the script and designed the props, sound and lighting for the production. The program debuted Jan. 14 and is performed Monday through Friday at 11 a.m. for visiting school groups in the StenniSphere auditorium.

RECAP . . .

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extrasolar planets that have circular orbits similar to the orbits of planets in Earth's solar system.

Remote sensing sees a climate change: NASA announced the creation of the first complete "biological record of Earth" by using data from NASA's Sea-viewing Wide Field-of-View sensor. Researchers also suggested the Earth is becoming a greener greenhouse, determining that plant life in the northern latitudes has been growing vigorously since 1981.

In February, NASA released a new map of Antarctica made from Radarsat data. Using the new maps and comparing them to maps produced in 1981, scientists will track Antarctic ice changes, a key to understanding global environment and climate change.

NASA comes down to Earth: In 2001, NASA announced a commercial partnership that will allow placement of advanced global positioning technologies in farm equipment. The technology will be used to help farmers navigate fields in poor weather and at night.

Throughout the summer, NASA satellites tracked the devastating spread of wildfires around the western United States, helping federal, state and local governments mitigate these natural disasters.

Human space flight programs reach milestones: Celebrating its first full year of human habitation, the International Space Station began its research in 2001 with the launch of the Destiny module, the first science lab delivered to the station. The International Space Station is now the most complex and powerful spacecraft ever built. With the station facing financial challenges, an independent task force produced a report that is expected to help managers get the program fiscally back on track. The construction of the International Space Station is made possible by NASA's robust fleet of Space Shuttles.

The shuttle celebrated its 20th anniversary in 2001, having carried more than three million pounds of cargo and more than 600 passengers into space.

Future NASA technology today: In 2001, NASA launched an ambitious multi-billion-dollar initiative designed to develop the technologies needed to build a second-generation reusable launch vehicle. NASA's Space Launch Initiative will also identify 21st-century designs that can provide safer, more reliable and less expensive access to space.

Instead of rocket fuel, NASA's propeller-driven Helios aircraft used solar energy to help set a world-record altitude of 96,500 feet. NASA researchers also tested a revolutionary cockpit display that will offer pilots an electronic picture of what is outside their windows, no matter the weather or time of day.

O'KEEFE . . .

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and chief financial officer at the Defense Department and later as Secretary of the Navy. Before that, he spent eight years on the staff of the Senate Appropriations Committee.

In 1993, President Bush and Defense Secretary Dick Cheney presented him the Distinguished Public Service Award. He was also the recipient of the Department of the Navy's Public Service Award in December 2000.

O'Keefe is a fellow of the National Academy of Public Administration and has served as chair of an academy panel on investigative practices. He was a visiting scholar at the Wolfson College of the University of Cambridge in the United Kingdom; a member of the Naval Postgraduate School's Civil-Military Relations Seminar Team for Emerging Democracies; and has conducted seminars for the Strategic Studies Group at Oxford University. He served on the National Security Panel to devise the 1988 Republican platform and was a member of the 1985 Kennedy School of Government program for national security executives at Harvard University.

O'Keefe earned a bachelor's degree in 1977 from Loyola University in New Orleans and a master's degree of public administration in 1978 from Syracuse University's Maxwell School of Citizenship and Public Affairs. He and his wife, Laura, reside in Ashburn, Va., with their children, Lindsey, Jonathan and Kevin.

CAMPAIGN . . .

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largest amount given to the United Way by Stennis contractors since Stennis began the Combined Agency Campaign. In addition, the number of donors in the 'leadership givers' category — donors who give $500 or more annually — increased 46 percent."

Employee donations from this year's campaign will go to the United Way of South Mississippi and the Greater New Orleans Area United Way. Proceeds from Stennis Space Center's Combined Federal/United Way Campaign for 2001 will benefit more than 30 local organizations and charities along the Gulf Coast and St. Tammany Parish.

SAFETY CORNER

Unreported close calls pave way for serious injury

Close call incidents do not often result in injuries. However, ignoring a close call could pave the way for a serious injury to happen. All close calls must be reported so they can be investigated and the hazard removed before anyone gets hurt.

Close calls are situations in which a worker has a narrow escape from harm. The worker probably feels lucky about getting away uninjured. These incidents can be lucky in another way — they can provide a preview of an injury that could happen, so measures can be taken to prevent it.

For example, a process industry technician starts to turn on the wrong control, almost creating a hazardous mix of chemicals. He catches his error in time, and no harm is done. At this point he has two choices: he can shrug it off, or he can talk with his supervisor about the close call. He may be able to keep another worker or himself from making the same mistake again. An investigation may disclose a flaw in the design of the controls, or it may show that the operators are distracted by fatigue, noise or other factors.

Reporting close calls is the only fail-safe way to ensure that a close call does not lead to an injury or death. Close call reporting forms are posted throughout Stennis, or reports can be submitted online through the Stennis intranet at *http://odyssey/safety/closecallframe.html*.

QUICK LOOK

■ **The Association for Cultural Awareness at Stennis** will sponsor the 23rd Annual Black History program Feb. 28 from 11 a.m. until 1 p.m. in the StenniSphere auditorium. The program is titled Bringing Black History into Focus.

■ **The professional development training spring schedule** at Stennis sponsored by USM Gulf Coast and The Center of Higher Learning will include the following courses: Object-Oriented Analysis and Design - Feb. 19-20; Ethics in Business - Feb. 26; Introduction to Systems Engineering - March 12-13; Franklin Covey's What Matters Most Seminar - March 21; Software Testing - March 25-26; and, Implementing Object-Oriented Design in C++ - April 2-3. To register, call (228) 867-8777.

■ **NASA is currently accepting applications for this year's SHARP program.** The program is designed to provide high school seniors in underrepresented categories an opportunity to build a career path in these disciplines. Deadline for applications is Feb. 28. For additional information, contact Joy Smith at Ext. 8-2118/2286, or visit the Web site at *www.mtsibase.com/sharp*.

E-COMPLEX . . .

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the E-1 test stand. "We commonly use gaseous hydrogen and nitrogen up to 14,000 psi and will be using liquid hydrogen and liquid oxygen at pressures upward of 8,000 psi. The responsibility to be safe, ensure the well-being of our personnel and safeguard the investment in equipment is an over-riding factor in our daily activities."

Other facilities are gearing up. The E-2 test stand is undergoing an upgrade of the data acquisition and control system in preparation for testing of an Air Force thrust chamber this summer, NASA's Kerry Klein, test director for the E-2 test stand, explained.

Also, the first phase of E-4 test facility construction for the foundations and facility structures is scheduled to start in February 2002, followed by construction of the Test Control Center and facility-run systems. NASA's Dale Sewell, E-4 test director, said the completion of this phase is planned for the end of FY 2003.

Stennis research engineers also use the E-Complex facilities to advance knowledge in test technology areas such as instrumentation, the study of exhaust plumes, test facility design and capability and data acquisition.

Next month, Lagniappe will profile the E-Complex Engineering group that puts the pencil to the paper to design test facilities in the E-Complex.

LAGNIAPPE

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EDITOR: . . . . . .B. R. Hawkins

CONTRIBUTING WRITER:
Karen Bryant

CONTRIBUTING PHOTOGRAPHER:
Charles E. Jones

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Stennis Space Center, MS 39529

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